Bangladesh University of Business and Technology (BUBT)

Project Proposal

On
Project Name: Imhotep
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Problem: We are doing this project to solve the problems of medical sectors. As we can see most of the time majority of people don't have their past medical documents either they lost their prescription or test report.In this application we can have the full the medical history of any patient also it connects doctor patient and pharmacist.So it can make medical sector easier.

Objectives: The Imhotep project is a medical service application designed to connect doctors, patients, and pharmacists on a single digital platform. It enables new registrations, secure logins, unique IDs (UIDs), and password recovery for all users.

- Doctors can access patient histories, update current conditions, and issue prescriptions linked to a UID or QR code.

- Patients can view their ongoing and past prescriptions, track upcoming counseling dates, and receive suggestions directly from their doctors.

- Pharmacists can verify prescriptions using a patient's UID and manage pending or dispensed medications.

This system ensures streamlined healthcare management, improved communication, and secure digital record-keeping between doctors, patients, and pharmacies.

Features: Common Features (for all users) :

- Secure registration & login system (with UID & password).
- Forgot password / account recovery option.
- Unique ID (UID) or QR code for identification.

Doctor Features:

- Access to patient's medical history (past diseases, treatments).
- New / Returning patient detection.
- Ability to update current health condition of the patient.
- Digital prescription generation linked with UID or QR code.
- Suggestions & medical notes for patients.

Patient Features:

- View ongoing prescriptions (doctor name, UID, instructions).
- Check past prescriptions & medical records.
- Next counseling/appointment date tracking.

Pharmacy Features:

- Verify prescription using patient UID or QR code.
- Check pending prescriptions from doctors.
- Mark prescriptions as dispensed once medicine is provided.
- Maintain dispensing history for record keeping

Development Model:

For Imhotep, we will use an Incremental Development Model. The app will be built step by step, starting with the basic features and then adding more.

Requirement Analysis – Collect needs from doctors, patients, and pharmacies.

Design – Plan database, user interface, and security.

Development –

Phase 1: Registration & Login.

Phase 2: Doctor's module (patient history, prescriptions).

Phase 3: Patient's module (next counseling date, ongoing & past prescriptions).

Phase 4: Pharmacy module (pending & dispensed prescriptions).

Testing – Check each module and full system for errors and security.

Deployment – Release beta version, then final version.

Maintenance – Fix bugs, update security, and add new features.

Feasibility Analysis & Possible Risks:

Feasibility Analysis

Technical: Possible with existing tools.

Economic: Low to medium cost, manageable.

Operational: Easy for doctors, patients, and pharmacies to use.

Time: Can be built in phases within a short time.

Possible Risks:

- Data security issues.
- System/server downtime.
- User adoption problems.
- Legal/privacy compliance.
- Ongoing maintenance cost.

Requirements: Python, Python GUI, Database,SQL

Limitations & Future Works:

Limitations:

- We can not use Internet in this application so it can not use properly.
- It is a dekstop base application so we cannot use it on mobile phone.

Future Works:

- We will add internet in this apptication.
- We will add Ai in this application.
- We will launch a mobile app of this application.

References: Online resourse on devolopment models,

Database System Concepts,*Seventh Edition* ,Avi Silberschatz ,Henry F. Korth, S. Sudarshan